REMARKS / ARGUMENT

A. INTRODUCTION

In the final office action dated May 15, 2005 (hereafter "office action"), claims 23-32, 55-96 were rejected:

claims 23-26, 28-30 were rejected under 35 U.S.C. § 102(b) based on U.S. patent no. 5,448,559 to Hayter *et al.* (hereafter "Hayter"); and

claims 27, 31, 32 were rejected under 35 U.S.C. § 103(a) based on Hayter in view of U.S. patent no. 5,497,375 to Hluchyj *et al.* (hereafter "Hluchyj");

claims 55-96 were rejected under 35 U.S.C. § 103(a) based on U.S. patent no. 5,444,529 to Osaki (hereafter "Osaki") in view of U.S. patent no. 5,754,529 to Heiss (hereafter "Heiss"); and

claims 68-72 were objected to for being in improper dependent form.

B. CLAIMS 23-26, 28-30: REJECTION UNDER 35 USC § 102(b)

Applicant respectfully asserts that claims 23-26, 28-30 of the present application are patentably distinguishable over Hayter because Hayter fails to disclose at least one limitation taught and claimed in the several embodiments of the present invention and filtering as claimed in the present invention is not implicit.

(1) Failure to teach all features of claimed invention

Claim 1 recites in relevant part: "wherein ... the output controls are arranged to monitor the backlog of buffered data units for delivery to their associated output ports ... and, if the backlog reaches a particular level, to enforce a rate limitation against additional data units for delivery to their associated output ports, wherein the additional data units in violation of the rate limitation are filtered by the rate filter." In this manner, the output may efficiently regulate the data coming to the port up to the maximum bandwidth of the port.

In contrast to the present invention, Hayter *does not* teach that the cells are filtered. Instead, Hayter discloses a "queuing arrangement" that temporarily buffers cells when bandwidth is unavailable during peak traffic but later allocates bandwidth for those same cells as bandwidth becomes available. In support, Applicant respectfully calls attention to the Summary (col. 2, lines 61-68) where it states that *bandwidth requests* may be buffered and released in a predetermined order. Clearly, the bandwidth requests are buffered because the *cells for which the bandwidth request was generated are also buffered and awaiting the allocation bandwidth.* If Hayter were actually filtering the cells at the input server as suggested by Examiner, there would be *no need to buffer the bandwidth requests.*

Instead of filtering cells, the Hayter "queuing arrangement" buffers cells at the input server until bandwidth is available at the output. As stated in Hayter, buffering data prevents loss through output port overload, thus avoiding the loss of data during peak traffic. Applicant respectfully calls attention to the Hayter Summary (col. 2, lines 34-41) which states:

> "It will be appreciated that by the expedient of providing in each input port server a *buffer store* for each output port server and by ensuring that no transmission takes place across the switch if output port server capacity is not available to accept it, *data loss through output port server overload is obviated.* Thus ATM operation during peaks of data traffic *without loss of data* is facilitated."

Assuming *arguendo* that Hayter filtered the cells at the input server during peak traffic when bandwidth was unavailable, Hayter would effectively discard the same cells that Hayter seeks to save from output port overload. Thus, if Hayter were filtering data at the input server, Hayter would not avoid the loss of data which is explicitly recited as the benefit of the invention in the Summary.

Examiner's assertion that the cells must be filtered (office action of May 14, 2004, paragraph 4) appears to be premised on the assumption that filtering is the only remedy for a temporary absence of available bandwidth. This is clearly not the case since the

12 of 17

"queuing arrangement" maintains extra buffer capacity even as the bandwidth requests are issued. For example, Hayter teaches the buffers at the input servers have multiple thresholds (see T1 & T2, Figure 3), and bandwidth requests are issued when the buffers are filled to the thresholds (col. 4, lines 22-31). Since each of the thresholds corresponds to a buffer level that is less than the maximum queue depth, the buffers are still able to store cells even if one or more bandwidth requests are denied. As such, Hayter is configured to temporarily buffer cells during peak traffic until bandwidth is available at the output.

In Hayter, when bandwidth later becomes available, the "queuing arrangement" may then allocate the bandwidth to transmit cells from the different input servers to the output servers *in the order in which the bandwidth requests were received* (col. 2, lines 65-68), for example. By queuing the bandwidth requests (and the cells for which the bandwidth was requested), Hayter asserts that the "queuing arrangement" offers a relatively efficient system with less probability of delays (col. 5, lines 45-48).

As explained above, there is no need or suggestion in Hayter to filter packets in response to the temporary denial of bandwidth. Although Examiner rejects Applicant's argument and asserted that Hayter would not be able to release the requests in a predetermined order without filtering (office action of May 14, 2004, paragraph 20), Applicant respectfully disagrees. Hayter clearly demonstrates that the buffers in the input servers are able to buffer cells so that they may later be released in the in order in which the bandwidth requests were issued, i.e. the predetermined order. Even if Hayter were adapted to release the bandwidth requests (and therefore release the cells) in a different order than received, Hayter still would not require filtering. Applicant speculates, for example, that Hayter may be able to alter the order in which the input servers' buffers were services while still releasing the cells in each of the individual buffers in the particular order in which the individual buffers were filled. Stated differently, Hayter may be able to service buffers A-Z of input servers 2-4 (Figure 1) in a select order while still dequeue cells from the individual buffers in the same order in which the cells were enqueued in the buffers. In this manner, Hayter could effectively release bandwidth requests in a "predetermined

order" *without filtering cells* at the input servers. The ATM system in Hayter is therefore completely consistent with Applicant's prior argument and neither needs or discloses data filtering as is claimed in claim 23.

For the reasons stated above, Hayter fails to teach that *data units in violation of a rate limitation be filtered by the rate filter*, as claimed in claim 23. Moreover, the present invention in its several embodiments is novel and nonobvious with respect to Hayter and the cited art. Independent claims 55, 63, 77, and 84 each include a similar feature and are therefore patently distinguishable for the reasons as claim 23.

(2) No explicit or implicit disclosure in cited art

If Examiner insists on maintaining the present rejection, Applicant respectfully requests that it be shown where each feature of the claimed invention be taught, *explicitly or implicitly*, in the prior art. In particular, Applicant requests a foundation be provided in the form of evidence or explanation for the conclusion that Hayter necessarily teaches cell filter to release bandwidth requests in a predetermined order, which is not implicitly taught for the reasons discussed above. See In re Pardo, 214 USPQ 673 (C.C.P.A. 1982) (assertions of technical facts must be supported by a pertinent reference to provide Applicant opportunity to challenge the correctness of assertion by Patent Office).

To the extent that Examiner is relying on personal knowledge to augment the disclosure of the prior art or provide a motivation to combine prior art, Applicant respectfully requests that the basis for this knowledge be explicitly set forth as well.

C. CLAIMS 55-96: REJECTION UNDER 35 USC § 103(a)

Applicant respectfully asserts that claims 55-96 are patentably distinguishable over Osaki or Heiss, alone or in combination, because (1) the cited art fails to disclose at least one limitation claimed in the several embodiments of the present invention and (2) a prima facie case of obvious has not been made.

(1) Failure to teach all features of claimed invention

Claim 55 recites in relevant part that: "if the backlog reaches a particular level, to enforce a rate limitation against additional data units *for delivery to their associated output ports* ... so that [the additional packets] are *not stored in the output data stores.*" In this manner, the present invention is adapted to filter packets before they are delivered to the output ports and avoid the need to (1) allocate bandwidth to transmit packets to the output and (2) store packets at the output buffer.

In contrast to the present invention, Osaki teaches that packets are transmitted through the packet switch 55, stored in the buffer 58, and—if the buffer exceeds the buffer capacity—retrieved from the buffer for filtering (col. 6, lines 49-54). As a result, Osaki unnecessarily wastes the bandwidth needed to transmit the packets through the packet switch 55 and wastes buffer capacity by storing packets that are eventually filtered. Osaki, therefore fails to enforce a rate limitation against additional data units *for delivery to their associated output ports* ... so that the packets are *not stored in the output data stores.*

The present invention, including claim 55 and its variants are patently distinguishable from the prior art.

(2) Failure establish a prima facie case of obviousness

Applicant respectfully asserts that a *prima facie* case of obviousness has not been presented because the proffered motivation to combine Osaki and Heiss is vague and lacking the requisite specificity. In re Rouffet, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) (Patent Office must "identify specifically . . . the reasons one of ordinary skill in the art would have been motivated to select the references and combine them"). In the office action in paragraph 12, Examiner merely states that:

> "[t]he motivation is to have a circuit arrangement that is of relatively low circuit-oriented expense in order to implement the message cells supplied to this circuit arrangement upon retention of the characteristic parameters determined for the individual virtual circuit connections."

15 of 17

This statement is problematic for several reasons. First, Applicant is unaware of any evidence to support the conclusion that the combination of Osaki and Heiss would yield a circuit arrangement having a "relatively low circuit-oriented expense." Second, Applicant asserts that the meaning of *"implement* the message cells supplied to this circuit arrangement" is vague because "implement" fails to denote the type of packet operation to which it refers, including packet inspection, transmission, or storage, for example. Third, the relevance of the "retention of the characteristic parameters determined for the individual virtual circuit connections" is not stated and its significance with respect the combination of Osaki and Heiss is not specified.

The stated motivation, therefore, is too vague to suggest to one skilled in the art to combine Osaki and Heiss. ATD Corporation v. Lydall, Inc., 48 USPQ 2d 1321, 1329 (Fed. Cir. 1998) (Determination of obviousness requires a teaching or suggestion within the prior art, or within the general knowledge of a person of ordinary skill in the field of the invention, to look to **particular sources** of information, to **select particular elements**, and to combine them **in the way they were combined by the inventor** (emphasis added)). Presumably, put simply, all inventions related to packet switching operations are motivated by a need to lower circuit-oriented expenses and implement packet operations. This need to control expense and process data, however, **does not** motivate one to combine Osaki and Heiss to create the claimed invention.

D.   CLAIMS 68-72

In response to the objection to the form, Applicant has canceled claims 68-72.

E.   CONCLUSION

For all the forgoing reasons, Applicant submits that the present invention is patently distinguishable from Hayter, Hluchyj, Osaki and Heiss either alone or in combination. Accordingly, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

16 of 17

Should there be any fees for this action, your office is authorized to draw from the firm deposit account number 02-3979. Should you have any questions, or identify any problem, I would appreciate a telephone call so that this matter may be resolved promptly.

Respectfully submitted,

Michael Blaine Brooks, PC

By: _____

Andrew S. Naglestad
Reg. No. 47,814
5010 No. Parkway Calabasas
Suite 104
Calabasas, CA 91302
Tel.: (818) 225-2920 ext. 202

17 of 17